

	National Defence Défense Nationale		Back to the DID List
DATA ITEM DESCRIPTION - DESCRIPTION DE DONNÉES			
1. TITLE – TITRE		2. IDENTIFICATION NUMBER - NUMÉRO D'IDENTIFICATION	
LIFE CYCLE MANAGEMENT PLAN		DID 4.4.1	
3. DESCRIPTION / PURPOSE – DESCRIPTION / OBJET			
The purpose of the Life Cycle Management Plan is to provide a systematic framework for NWSO to define configuration management, performance verification and system requirements to meet mission goals and equipment life as defined in this SOW. The plan involves the prediction of future performance of an asset or a group of assets, based on scenarios and maintenance strategies.			
4. APPROVAL DATE DATE D'APPROBATION	5. OFFICE OF PRIMARY INTEREST (OPI) BUREAU DE PREMIERE RESPONSABILITÉ (BPR)	6. GIDEP APPLICABLE D'ÉCHANGE DE DONNÉES PERTINENT	
July 2020	NWSO Technical Authority (TA)	N/A	
7. APPLICATION / INTERRELATIONSHIP – APPLICATION / INTERDÉPENDANCE			
CDRL-4.4.1 and SOW paragraph 4.4.1 refer. This DID contains the format and content preparation instructions for the data generated under the work tasks described in the NWS O&M SOW.			
8. ORIGINATOR - AUTEUR		9. APPLICABLE FORMS - FORMULES PERTINENTES	
NWSO TA		NIL	
10. PREPARATION INSTRUCTIONS – INSTRUCTIONS SUR LA PRÉSENTATION DES DONNÉES			
<div> <div>10.1</div> <div> Source Document NWS SOW Section 4, paragraph 4.4 </div> </div> <div> <div>10.2</div> <div> Content and Format <div>10.2.1 The Contractor shall prepare, implement and administer a Life Cycle Management Plan. The plan shall be delivered nine months after contract award.</div> <div>10.2.2 The Life Cycle Management Plan shall detail and employ a comprehensive Life Cycle Material Management (LCMM) and Life Cycle Facilities Management (LCFM) programs with the goal of maximizing the life cycle of the North Warning installed equipment and facilities while meeting or exceeding mission requirements.</div> <div>a. Qualifications <div> (1) Ensure qualifications and training requirements of all personnel are equivalent with the requirements set out in this Statement Of Work (SOW);</div> <div> (2) Establish and administer a Preventive Maintenance Plan (PMP) including maintenance routines for NWS installed equipment and systems, and for buildings and other real property assets, ensuring all program requirements meet standards provided in this SOW;</div> <div> (3) Manage sparing for NWS installed equipment and systems, and for buildings and other real property assets to ensure mission requirements as defined in this SOW are met or exceeded;</div> <div> (4) Ensure regulatory compliance of NWS installed equipment and systems, and for buildings and other real property assets;</div> <div> (5) Ensure the currency of all technical documentation, including drawings;</div> </div> </div> </div>			

- (6) Maintain configuration control of NWS installed equipment and systems and record drawings of buildings and other real property assets;
- (7) Conduct root cause failure analysis of failed equipment and systems;
- (8) The identification of quality deficiencies in the performance of a particular system or component of a system;
- (9) Perform trend analysis;
- (10) Initiate Unsatisfactory Condition Reports (UCRs);
- (11) Prepare Business Case Option Analysis (BOCA) for approved UCRs;
- (12) Prepare decommissioning and disposal plans for obsolete equipment and systems and deconstruction of buildings and other real property assets; and
- (13) Prepare Document Change Notices (DCN).

b. LCMM and LCF services

LCMM services shall be provided for the following:

- (1) Satellite Ground Terminals (SGT) radomes;
- (2) Ground/Air/Ground (G/A/G) radio Ultra High Frequency (UHF), Very High Frequency (VHF) and ancillary equipment;
- (3) Private Branch Exchange (PBX) systems , including Public Announcement (PA) system;
- (4) Long Haul Communications Network (LHCN);
- (5) Security And Video Monitoring Network (SAVMN);
- (6) Mobile Support Equipment (MSE);
- (7) All Information Technologies (IT) equipment;
- (8) Monitoring Systems Remote Interface Communications Controller (RICC), Remote Terminal Unit (RTU), Control and Monitoring System (CMS), Programmable Logic Controller (PLC) and Supervisory Control and Data Acquisition (SCADA);
- (9) AN/FPS-117 and AN/FPS-124 Radar systems;
- (10) Automated Weather Observation System (AWOS);
- (11) Automated Test Equipment (ATE);
- (12) Radar Towers;
- (13) Buildings and structures;
- (14) Heating, Ventilation and Air Conditioning (HVAC) systems;
- (15) Power Generation Systems (PGS);
- (16) Electrical Systems;
- (17) Bulk fuel storage and handling systems;
- (18) Potable water systems;
- (19) Waste water systems;
- (20) Fire systems; and
- (21) Grounding and lightning protection.

d. The Contractor shall employ Subject Matter Experts (SMEs) to work with the United States (US) LCMMs and Canadian Technical Authority (TAs) on the following equipment

- (1) AN/FPS-117, AN/FPS-124 radar systems including radomes for both and the Ground/Air/Ground (GAG) radios.
- (2) Automated Weather Observation System (AWOS) in conjunction with the Canadian TA; and
- (3) Automated Test Equipment (ATE).

10.2.2 The LCMM Plan shall contain the following Phases:

a. Conception Phase

- 1) Identify new projects, modifications, and procedural requirements through the analysis of the "In-service" phase of the NWS;
- 2) Develop new life cycle requirements through options analysis to determine technical feasibility, to develop cost estimates, and to evaluate associated risk(s); and
- 3) Identify new projects, modifications, and procedural requirements through the analysis of the "In-service" phase of the NWS.

b. Acquisition Phase

Perform the following acquisition activities:

- 1) Developing specifications;
- 2) Design or engineering;
- 3) Software development;
- 4) Prototype and other testing;

- 5) Developing a maintenance concept;
- 6) Determining maintenance and support requirements, including staffing levels, skills training, facilities, materials, tools and test equipment and OEM or third party support;
- 7) Determining sparing levels and locations;
- 8) Determining and developing technical data packages;
- 9) Installation and commissioning; and
- 10) Acceptance and hand-over.

c. In-Service Phase

Perform the following life cycle management functions during the In-Service Phase:

- 1) Monitor and report life cycle cost and equipment performance trends;
- 2) Monitor and evaluate operational availability statistics, Equipment Status Reports (ESR) and other Work Management System (WMS) information, quality control reports, Unsatisfactory Condition Reports (UCR), Quality Deficiency Reports (QDR), employee suggestions and industry literature to identify potential items requiring action;
- 3) Specify WMS information requirements;
- 4) Assess equipment failures and UCRs;
- 5) Validate Equipment Change Requests (ECR), UCRs and employee suggestions;
- 6) Conduct root cause analysis where monitored failure rates or cost thresholds have been exceeded;
- 7) Produce maintenance instructions and schedules;
- 8) Monitor the effectiveness of maintenance personnel, training, technical data, facilities, tools and test equipment;
- 9) Monitor adequacy of LRU and SRU sparing levels to meet corrective maintenance usage requirements and recommend revisions for NWSO TA approval;
- 10) Monitor the effectiveness of equipment and software testing as part of repair and overhaul and other maintenance processes;
- 11) Determine alternate sources of parts and services, as necessary;
- 12) Analyze data on equipment failures and other maintenance actions;
- 13) Prepare cost estimates for requirements option analysis; and
- 14) Maintain configuration management information.

d. Disposal Phase

Perform the following life cycle management disposal services:

- 1) Develop plans, estimates and schedules for equipment removal activities;
- 2) Direct the removal or decommissioning;
- 3) Identify associated support items that will be deleted or changed; and
- 4) Direct the modification of associated configuration management information.

e. Cost Analysis

Utilize business case analysis to determine the cost-effectiveness of operating and maintaining the NWS Radar, Communications, Facilities and Ancillary equipment. Ensure that business case analysis forms the basis for providing recommendations in the following areas:

- 1) Testing programs, including equipment, software, personnel, skills, technical data, and procedures;
- 2) Levels and locations for spare parts and materials;
- 3) GFE;
- 4) Cost-effective life extension modification; and
- 5) Maintenance or procedural changes.

f. Trend Analysis

Conduct trend analysis of, and report on, NWS Radar, Communications, Facilities and Ancillary Equipment performance, utilizing maintenance data extracted from the Contractor's work management system, in order to analyze maintenance actions – actions that sustain the capacity of an item or system to provide its designed functionality – over time, to determine areas where equipment replacement or modification or changes to procedures or support elements may be required.

10.2.3 The Contractor shall have overall authority for managing all phases of material and facility life cycles including conception, acquisition, in service support and disposal and shall also have responsibility for managing NWS configured items as defined in this Statement of Work (SOW).

10.2.4 The LCMM and LCFM plan shall be in a format proposed by the contractor and as accepted by the Crown/ NWSO TA. The plan shall be reviewed at a minimum annually or more frequent if warranted. The NWSO TA reserves the right to have the Contractor amend the format and contents of the plan at any time. Any and all changes to the plan shall be completed

within 15 business days and the plan shall be available online.